

**What Is Claimed Is:**

1        1.        A method for configuring a plurality of network interfaces  
2        coupling a plurality of computers, comprising:  
3                receiving a request at a computer of the plurality of computers to configure  
4        the plurality of computers into a cluster of computers, wherein the cluster of  
5        computers function in concert as a single unit;  
6                establishing at the computer whether a network interface of the plurality  
7        of network interfaces is one of private and public, wherein a private network  
8        interface is used for intercommunications within the cluster of computers and a  
9        public network interface is used for communications with a client computer;  
10               determining a connectivity among the plurality of computers;  
11               calculating a configuration for the cluster of computers; and  
12               installing the cluster of computers using the configuration.

1        2.        The method of claim 1, wherein establishing whether the network  
2        interface is one of private and public includes:  
3                sending a ping message on the network interface;  
4                receiving a plurality of responses to the ping message on the network  
5        interface;  
6                sending a router discovery message on the network interface;  
7                listening on the network interface for a response to the router discovery  
8        message; and  
9                classifying the network interface as public or private based on responses  
10        received, wherein the network interface is classified as private if a number of  
11        responses to the ping message is less than or equal to a number of computers in

- 1 the cluster and if no response was received from the router discovery message,
- 2 otherwise classifying the network interface as public.

- 1           3.       The method of claim 1, wherein determining the connectivity
- 2       among the plurality of computers includes:
  - 3           sending a message on the network interface, wherein the message
  - 4       identifies a sending computer and the network interface;
  - 5           listening for a response to the message on the network interface; and
  - 6           creating a data structure containing a matrix of responses received for the
  - 7       network interface.

1                  4.        The method of claim 3, wherein sending the message includes  
2 using a data link provider interface (DLPI).

- 1 5. The method of claim 3, wherein calculating the configuration for
- 2 the cluster of computers includes:
  - 3 requesting the matrix from each computer in the plurality of computers;
  - 4 combining the matrix from each computer into a master matrix;
  - 5 examining the master matrix for a pair of computers with at least two
  - 6 private network interfaces; and
  - 7 adding the pair of computers to the cluster of computers.

1           6.       The method of claim 1, further comprising:  
2           presenting the configuration to an administrator; and  
3           allowing the administrator to edit the configuration.

1           7.     The method of claim 6, wherein presenting the configuration to the  
2 administrator includes one of displaying the configuration on a web browser and  
3 displaying the configuration on a text-based display screen.

1           8.     The method of claim 7, wherein allowing the administrator to edit  
2 the configuration includes:  
3           accepting a change to the configuration from the administrator;  
4           verifying that the change to the configuration does not violate an  
5 established rule for the configuration; and  
6           if the change to the configuration is valid, incorporating the change into  
7 the configuration.

1           9.     The method of claim 8, further comprising passing the  
2 configuration to a configuration program for configuration of the cluster.

1           10.    A computer-readable storage medium storing instructions that  
2 when executed by a computing device causes the computing device to perform a  
3 method for configuring a plurality of network interfaces coupling a plurality of  
4 computers, the method comprising:

5           receiving a request at a computer of the plurality of computers to configure  
6 the plurality of computers into a cluster of computers, wherein the cluster of  
7 computers function in concert as a single unit;  
8           establishing at the computer whether a network interface of the plurality  
9 of network interfaces is one of private and public, wherein a private network  
10 interface is used for intercommunications within the cluster of computers and a  
11 public network interface is used for communications with a client computer;  
12           determining a connectivity among the plurality of computers;

13 calculating a configuration for the cluster of computers; and  
14 installing the cluster of computers using the configuration.

1 11. The computer-readable storage medium of claim 10, wherein  
2 establishing whether the network interface is one of private and public includes:  
3 sending a ping message on the network interface;  
4 receiving a plurality of responses to the ping message on the network  
5 interface;  
6 sending a router discovery message on the network interface;  
7 listening on the network interface for a response to the router discovery  
8 message; and  
9 classifying the network interface as public or private based on responses  
10 received, wherein the network interface is classified as private if a number of  
11 responses to the ping message is less than or equal to a number of computers in  
12 the cluster and if no response was received from the router discovery message,  
13 otherwise classifying the network interface as public.

1 12. The computer-readable storage medium of claim 10, wherein  
2 determining the connectivity among the plurality of computers includes:  
3 sending a message on the network interface, wherein the message  
4 identifies a sending computer and the network interface;  
5 listening for a response to the message on the network interface; and  
6 creating a data structure containing a matrix of responses received for the  
7 network interface.

1 13. The computer-readable storage medium of claim 12, wherein  
2 sending the message includes using a data link provider interface (DLPI).

1           14. The computer-readable storage medium of claim 12, wherein  
2 calculating the configuration for the cluster of computers includes:  
3           requesting the matrix from each computer in the plurality of computers;  
4           combining the matrix from each computer into a master matrix;  
5           examining the master matrix for a pair of computers with at least two  
6 private network interfaces; and  
7           adding the pair of computers to the cluster of computers.

1           15. The computer-readable storage medium of claim 10, the method  
2 further comprising:  
3           presenting the configuration to an administrator; and  
4           allowing the administrator to edit the configuration.

1           16. The computer-readable storage medium of claim 15, wherein  
2 presenting the configuration to the administrator includes one of displaying the  
3 configuration on a web browser and displaying the configuration on a text-based  
4 display screen.

1           17. The computer-readable storage medium of claim 16, wherein  
2 allowing the administrator to edit the configuration includes:  
3           accepting a change to the configuration from the administrator;  
4           verifying that the change to the configuration does not violate an  
5 established rule for the configuration; and  
6           if the change to the configuration is valid, incorporating the change into  
7 the configuration.

1        18. The computer-readable storage medium of claim 17, wherein the  
2 method further comprises passing the configuration to a configuration program for  
3 configuration of the cluster.

1        19. An apparatus that facilitates configuring a plurality of network  
2 interfaces coupling a plurality of computers, comprising:  
3            a receiving mechanism configured to receive a request at a computer of the  
4 plurality of computers to configure the plurality of computers into a cluster of  
5 computers, wherein the cluster of computers function in concert as a single unit;  
6            an establishing mechanism configured to establish at the computer  
7 whether a network interface of the plurality of network interfaces is one of private  
8 and public, wherein a private network interface is used for intercommunications  
9 within the cluster of computers and a public network interface is used for  
10 communications with a client computer;  
11            a determining mechanism configured to determine a connectivity among  
12 the plurality of computers;  
13            a calculating mechanism configured to calculate a configuration for the  
14 cluster of computers; and  
15            an installing mechanism configured to install the cluster of computers  
16 using the configuration.

1        20. The apparatus of claim 19, further comprising:  
2            a sending mechanism configured to send a ping message on the network  
3 interface;  
4            a listening mechanism configured to receive a plurality of responses to the  
5 ping message on the network interface;

6           wherein the sending mechanism is further configured to send a router  
7   discovery message on the network interface;  
8           wherein the listening mechanism is further configured to receive a  
9   response to the router discovery message on the network interface; and  
10          a classifying mechanism that is configured to classify the network  
11   interface as public or private based on responses received, wherein the network  
12   interface is classified as private if a number of responses to the ping message is  
13   less than or equal to a number of computers in the cluster and if no response was  
14   received from the router discovery message, otherwise classifying the network  
15   interface as public.

1           21.    The apparatus of claim 19, further comprising:  
2            a sending mechanism that is configured to send a message on the network  
3   interface, wherein the message identifies a sending computer and the network  
4   interface;  
5            a listening mechanism that is configured to receive a response to the  
6   message on the network interface; and  
7            a creating mechanism that is configured to create a data structure  
8   containing a matrix of responses received for the network interface.

1           22.    The apparatus of claim 21, wherein the sending mechanism is  
2   configured to use a data link provider interface (DLPI).

1           23.    The apparatus of claim 21, further comprising:  
2            a requesting mechanism that is configured to request the matrix from each  
3   computer in the plurality of computers;

4           a combining mechanism that is configured to combine the matrix from  
5    each computer into a master matrix;  
6           an examining mechanism that is configured to examine the master matrix  
7    for a pair of computers with at least two private network interfaces; and  
8           an adding mechanism that is configured to add the pair of computers to the  
9    cluster of computers.

1           24.    The apparatus of claim 19, further comprising:  
2           a presentation mechanism configured to present the configuration to an  
3    administrator; and  
4           an editing mechanism configured to allow the administrator to edit the  
5    configuration.

1           25.    The apparatus of claim 24, wherein the presentation mechanism is  
2    configured to present the configuration to the administrator by one of displaying  
3    the configuration on a web browser and displaying the configuration on a text-  
4    based display screen.

1           26.    The apparatus of claim 25, further comprising:  
2           an accepting mechanism that is configured to accept a change to the  
3    configuration from the administrator;  
4           a verifying mechanism that is configured to verify that the change to the  
5    configuration does not violate an established rule for the configuration; and  
6           an incorporating mechanism that is configured to incorporate the change  
7    into the configuration, if the change to the configuration is valid.

1           27. The apparatus of claim 26, further comprising a passing  
2 mechanism configured to pass the configuration to a configuration program for  
3 configuration of the cluster.